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Jerry Johnson Campground Restoration Project Monitoring Report, September 2006

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Introduction

Jerry Johnson Campground on the Clearwater National Forest (NF) was clearcut in the early spring of 2004 to allow the site to be re-opened for public use. Root disease and stem decay in the predominantly grand fir and Douglas-fir stand made this action necessary. Restoration of white pine and western larch by grand fir and Douglas-fir tree removal, site preparation, and planting was funded, in part, using Prevention, Suppression and Restoration (PSR) funds provided by Forest Health Protection (FHP).

Figure 1. Jerry Johnson Campground in 2004 after tree removal.

History

Jerry Johnson Campground is located on Idaho State Highway 12 in the wild and scenic river corridor between the-Idaho Montana border and the confluence of Lochsa and Selway Rivers (approximately 75 miles upriver from Kooskia, Idaho). It is a historic use campground that was expanded and renovated just prior to the decision to clearcut.

I first visited the campground in August of 2003. Root disease in both tree species, primarily caused by *Heterobasidion annosum,* and stem decay in grand fir caused by *Echinodontium tinctorium* were found throughout the campground. In the past the site has required several large scale hazard tree removals in an attempt to make the campground safer for visitors.

A formal hazard tree survey was completed in September 2003 to identify and rank hazard trees according to their relative hazard (Hagle and others 2004). Despite a large hazard tree removal project here the previous year, 169 additional trees (including 24 dead) were recommended for removal. Annual reassessment and, probably, tree removal was considered necessary to ensure minimal user safety in Jerry

Table 1. Trees present in campground before (fall 2003) and after treatment (spring 2006).					
Present before clearcut harvest				Present after regeneration	
Species	Total	Dead	Average d.b.h.	Reserved trees	Planted seedlings
Douglas-fir	75	7	20.9	6	
Grand fir	746	16	18.6	22	
Lodgepole pine	17	2	14.8	18	
Ponderosa pine	4	0	30.5	4	2400
Engelmann Spruce	1	0	8.5	1	50
Western white pine					2550
Western larch					2550
All species	843	25		51	7550

Johnson Campground. We recommended development of a vegetation management plan that would include regeneration of root disease resistant tree species. That plan ultimately selected clearcut harvesting an immediate regeneration with root disease resistant trees and shrubs.

Harvest on 13 acres was completed in spring of 2004 and planting started spring 2004 and continued through spring of 2005 (Table 1). Stand tending to was necessary because of the unusually dry conditions, and to reduce ungulate browsing.

Tree Removal

Approximately $20,000 of the $36,000 provided from PSR funds was spent on tree removal from the 13 acre campground. The remote location combined with high rates of cull and low market values resulted in a high net cost to the Forest. Protection of campground improvement and site preparation requirements increased the direct operator costs as well as overhead costs for the contract administrator (Dean Roach) and silviculture specialists (Bill Wulff, Wes Paulson and John Weston). PSR funds paid a portion of these costs.

Tree Planting and Tending

The remaining $16,000 was used to establish a seedling stand of root disease resistant species. Planting and tending costs included purchase of conifer seedlings from the Coeur d'Alene nursery and contracted planting, seedling protection, fertilization, and monitoring.

In the spring of 2004, 13 acres were planted with a mix of ponderosa pine, western white pine and western larch seedlings on 7 by 8 foot spacing. The density, after accounting for un-plantable area (road and parking areas), was about 550

Figure 2. Engelmann spruce seedling.

trees/acre. Ungulate (deer, elk and moose) repellent was to reduce browsing damage. The survival exam in fall of 2004 showed 450 trees/acre (80% survival); Ponderosa pine had the best survival rate.

The stand was fertilized in 2005 with 20 pounds/acre fertilizer (15-15-15) to stimulate growth of shrubs to improve aesthetics. This appeared to have been successful and was recommended as repeat treatment in 2006 and 2007.

In June of 2005, another 300 trees, a mixture of ponderosa pine and western larch were added to the site. A walk-through exam in March of 2006 found significant browse damage and big-game repellant was again applied in April. This was a late planting and the condition of the trees was poor so survival may have been low. The survival exam in May of 2006 found 450 planted seedlings per acre.

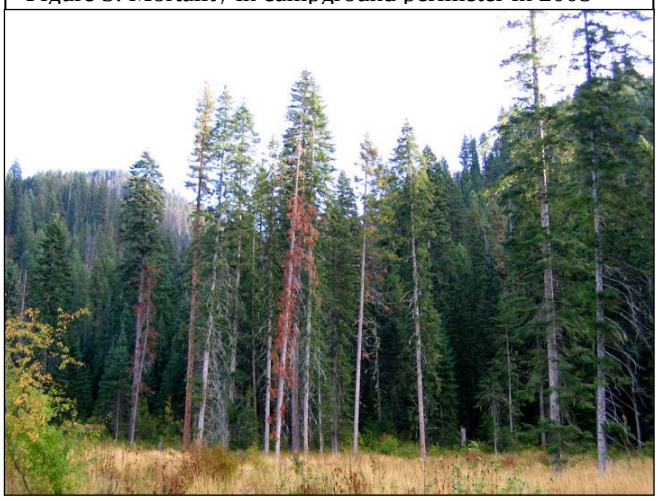
Conclusions

Jerry Johnson Campground is well on the road to recovery. The species mixture in now has can be expected to thrive for at least a century on this site with maintenance. Mortality has continued to occur around the perimeter of the campground and should be monitored to assure that these trees do not become hazards to campsites near the perimeter (Figure 3).

Thinning

As natural regeneration of grand fir and Douglas-fir increases stand density, thinning will be desirable to prevent over-crowding. Western larch and ponderosa pine are particularly sensitive to lateral competition. It is important to prevent the species composition reverting to root disease susceptible species. If Douglas-fir and grand fir are allowed to grow large enough to become hazardous, the investment in tree removal will be necessary again. These species can be safely used as screening when they are small but should be removed before they are large enough to become hazards. Root pathogens will remain on this site and infect any grand fir or Douglas-fir growing there but typically will not be very obvious until the host trees are about 40 years of age or more. A few trees of other species can be expected to die from root disease when they are young but damage is expected to be slight in species other then grand fir and Douglas-fir.

Figure 3. Mortality in campground perimeter in 2005



White pine blister rust

Western white pine should be monitored for presence of white pine blister rust cankers. Branch pruning is recommended by age 15 or sooner, depending on evidence of branch infections. Pruning will prevent most infections from reaching the stem, thereby prevent most mortality. Although many of the trees can be expected to resist infection by blister rust, infections are likely to occur and, in the campground setting, management can greatly improve survival.

Report Cited:

Hagle, S. K., K. Perry, R. Wiles. 2004. Jerry Johnson Campground hazard tree evaluation, September 2003. USDA Forest Service, Forest Health Protection, Northern Region, Report 03-10. 14 P